

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|  |   |   |
|--|---|---|
| Applicant's or agent's file reference<br><b>W1.2389PCT</b>                                       | FOR FURTHER ACTION<br>See Form PCT/IPEA/416                     |   |
| International application No.<br><b>PCT/EP2004/051406</b>  | International filing date (day/month/year)<br><b>08.07.2004</b> | Priority date (day/month/year)<br><b>11.07.2003</b> |
| International Patent Classification (IPC) or national classification and IPC<br><b>B41F13/02</b> |   |   |
| Applicant<br><b>KOENIG &amp; BAUER AKTIENGESELLSCHAFT</b>  |   |   |

|  |              |   |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
|--|--------------|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|-------------------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|-------------------------------------|-------------|--|-------------------------------------|--------------|---|
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>11</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>9</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> |              |   |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <p>4. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>   |              | <input checked="" type="checkbox"/>   | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application | <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/>  | Box No. I    | Basis of the report   |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input type="checkbox"/>   | Box No. II   | Priority  |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input type="checkbox"/>   | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input checked="" type="checkbox"/>  | Box No. IV   | Lack of unity of invention  |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input checked="" type="checkbox"/>  | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input type="checkbox"/>   | Box No. VI   | Certain documents cited   |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input checked="" type="checkbox"/>  | Box No. VII  | Certain defects in the international application  |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |
| <input checked="" type="checkbox"/>  | Box No. VIII | Certain observations on the international application   |           |                     |                          |            |          |                          |             |  |                                     |            |                            |                                     |           |   |                          |            |                         |                                     |             |  |                                     |              |   |

|   |                                   |
|---|-----------------------------------|
| Date of submission of the demand        | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer                |
| Facsimile No.                           | Telephone No.                     |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/051406

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-22 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-42 \_\_\_\_\_ received by this Authority on /filed with the demand
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/5-5/5 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. IV

Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
  - ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
  - ☒ not complied with for the following reasons:

**See Supplemental Box**

4. Consequently, this report has been established in respect of the following parts of the international application:

☒ all parts.☐ the parts relating to claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

|                               |        |             |     |
|-------------------------------|--------|-------------|-----|
| Novelty (N)                   | Claims | <u>1-42</u> | YES |
|                               | Claims | <u></u>     | NO  |
| Inventive step (IS)           | Claims | <u>1-42</u> | YES |
|                               | Claims | <u></u>     | NO  |
| Industrial applicability (IA) | Claims | <u>1-42</u> | YES |
|                               | Claims | <u></u>     | NO  |

## 2. Citations and explanations (Rule 70.7)

1. The prior art closest to the subject matter of claim 1 is described in document EP-A-1048460 (D2), which discloses a process for influencing the fan-out effect, an image being first taken by a sensor (5) in the form of a CCD camera which senses markings on a web and, in the event of a deviation from a prescribed set value, a regulation command is transmitted to a regulation element for influencing the fan-out effect.

The subject matter of claim 1 differs from D2 in that

- the sensor detects the printed image over a scanning width of at least one fourth of the web width, and
- the axial position of the pixels in two printed image sections of a colour separation of a particular colour is compared with a reference position, in particular with a relative reference position, for the pixels of both printed image sections, and
- the position of defined pixels or picture zones of the colour separation of said colour from

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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|           |   |
|-----------|---|
| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
|-----------|---|

image data of the preliminary printing stage is used as reference position.

The subject matter of claim 1 is therefore novel.

This combination of features appears to reduce the technical complexity of the machinery used.

Document EP-A-1300243, which was cited by the applicant, uses data from the preliminary printing stage in order to generate set values for comparison purposes, but only in connection with the longitudinal register control.

Consequently, proceeding from D2, a person skilled in the art would have needed to implement several non-obvious steps in order to arrive at the subject matter of claim 1.

Neither D2, nor any of the remaining documents, or a direct combination of their teachings, could have suggested this constellation of features in claim 1 for this alleged purpose.

Claim 1 therefore involves an inventive step and, together with the developments in dependent claims 7, 11, 12 and 38-42, meets the requirements of PCT Article 33(1) to 33(4).

2. The prior art closest to the subject matter of claims 2, 4 and 29 is document DE-U-29501373 (D1) (cf. page 5, last paragraph - page 6, paragraph 2;

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement   |
|-----------|---|
|           | <p>claims 9 and 10; figures 1, 5, 6), which describes a process for influencing the fan-out effect by means of a device for influencing the fan-out effect, using a sensor mechanism (58-61) which is part of a lateral register control/regulation unit (63), parts of a lateral register control/regulation unit (63) and measurement values (a1-a4) from a lateral register control/regulation unit (63) for driving a device (11, 12, 67) for influencing the fan-out effect.</p> <p>2.1 The subject matter of claim 2 differs from D1 in that the lateral register is corrected by the lateral register control/regulation unit by means of an actuator when the printed image as a whole deviates laterally from its set position, and correction is carried out by the device for influencing the fan-out effect when the analysis of the results reveals that the set position has been taken but that the printed image is distorted or widened.</p> <p>The subject matter of claim 2 is therefore novel.</p> <p>This differentiating regulation process cannot be found in any of the remaining documents, and therefore a process as per claim 2 for achieving an economic regulation architecture is not obviously suggested by the prior art.</p> <p>Claim 2 therefore involves an inventive step and, together with its dependent claims, meets the</p> |

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

requirements of PCT Article 33(1) to 33(4).

- 2.2 The subject matter of claims 4 and 29, which are corresponding claims, differs from D1 in that the image supplied by a sensor which detects the printed image over a scanning width of at least one fourth the web width is analysed in order to determine the fan-out effect.

The subject matter of claims 4 and 29 is therefore novel.

This reduces the complexity of the technical machinery required, in comparison with D1.

Although sensors for detecting the entire web width are known from the prior art, replacing the different sensors required in D1 does not appear to be possible without further adaptations, and therefore this combination of features does not appear to be obvious either.

Claims 4 and 29 therefore obviously involve an inventive step and, together with their dependent claims, meet the requirements of PCT Article 33(1) to 33(4).

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**Box No. VII      Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Document DE19501373U1, which is cited on page 1 of the application, cannot be found. It appears to correspond to document D1.



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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The application does not meet the requirements of PCT Article 6 because claim 1 is unclear.

Page 2, paragraphs 3 and 4, and pages 11-18 (in particular page 15, paragraph 3 - page 16, paragraph 1) of the description indicate that the main concept of the present invention is that of using the same measurement and/or control means for correcting lateral register and fan-out errors, thus reducing technical complexity.

Consequently, the features defined in claims 2, 4 and 29 are necessary for the definition of the invention.

Since independent claim 1 does not contain these features, it does not meet the requirement of PCT Article 6 in conjunction with PCT Rule 6.3(b), according to which each independent claim must include all the technical features that are necessary for the definition of the invention.

If dependent on claim 1, claim 22 is contradictory.

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

**BOXES I AND IV****BOX I****Basis of the report**

The amendments submitted with the letter of 27 April 2005 introduce substantive matter which goes beyond the original disclosure in the international application as filed, thereby contravening PCT Article 34(2)(b). This concerns the following amendments:

The present claim 4 combines the original claims 4 and 6, and the present claim 5 refers back to claim 4.

The combination of embodiments in the original claims 5 and 6 is now claimed, while in the original disclosure, the embodiments in claims 5 and 6 were separated and no indication was given of their combination.

Their combination is therefore excluded from this report.

**BOX IV****Lack of unity of invention**

The International Searching Authority has determined that this international application contains multiple (groups of) inventions which are not linked by a single general inventive concept (PCT Rule 13.1), as follows:

I: claim 1: scanning width of a sensor equal to a fourth

## Supplemental Box

of the web width for influencing the fan-out effect  
II: claim 2: influencing the lateral register and the  
fan-out effect by means of common features

The reasons therefor are as follows:

The general idea that links independent claim 1 to  
independent claim 2 is essentially that of a process for  
influencing the fan-out effect, the measurement values  
supplied by a sensor being used to influence the fan-out  
effect.

However, this idea is not novel (cf. document EP-A-  
1048460, paragraphs [0079] and [0080]). Consequently,  
there is no technical relationship between claims 1 and  
2, within the meaning of PCT Rule 13.2, and the unity of  
invention required by PCT Rule 13.1 is absent.

The remaining independent claims appear to possess unity  
of invention.